COUNTY OF LOS ANGELES Public Health

THE PUBLIC'S HEALTH

Newsletter for Medical Professionals in Los Angeles County

Volume 7 • Number 10

November-December 2007

Preconception Care Findings

The 2005 Los Angeles Mommy and Baby (LAMB) project

PRECONCEPTION CARE

According to the Centers for Disease Control and Prevention (CDC) 1, preconception care is recognized as a critical component of health care for women of reproductive age. The main goal of preconception care is to provide health promotion, screening and interventions for women of reproductive age to reduce risk factors that might affect future pregnancies. Comprehensive data on preconception care in LAC however, is lacking.

Many pregnant women fail to seek care early or to avoid risks for poor birth outcomes during the crucial

weeks when the embryo's organs are formed and it is most vulnerable to drugs, viruses, and other risks.² In California, 49% of women aged 18 – 44 are at risk of unintended pregnancy; most at risk are women in their 20s.³, ⁴ Women with unintended pregnancies are more likely to see their provider later than women with intended pregnancies.⁵ Some women do not know they are pregnant because early symptoms of pregnancy also occur in other conditions.⁶



MATERNAL AND INFANT HEALTH DATA LACKING IN LAC

Due to a lack of comprehensive LAC maternal and infant health information, the Maternal, Child and Adolescent Health (MCAH) Program conducted the Los Angeles Mommy and Baby (LAMB) Survey in 2005 to establish a surveillance system to monitor maternal and infant health in LAC. Specifically, LAMB collected LAC data on maternal preconception health. This article will highlight the 2005 LAMB findings on preconception care while future articles will present findings on additional areas examined by the study*

The 2005 LAMB survey contained questions on maternal experiences before, during and after pregnancy. The questions were drawn primarily from several validated state and national surveys. Unfortunately, the available survey sources failed to provide comprehensive information regarding maternal health indicators for high-risk LAC mothers by race or service planning area (SPA).

Preconception health faces many challenges. For example, pregnancy is often too short a time to optimally treat many pre-existing risks associated with poor outcomes, such as substance abuse, maternal infections and constant stressors. Moreover, chronic illnesses such as diabetes and hypertension should be controlled before pregnancy. Women with serious preconception risks such as congenital heart disease or chronic renal failure require extensive preconception planning. Historically, these women might not have survived childbearing with these conditions in the past 8, 9,10.

*The study examined areas that are known to have an impact on birth outcomes, including preconception health, prenatal care, maternal medical conditions during pregnancy, and psychosocial and behavioral risk factors.

THE PUBLIC'S HEALTH



313 North Figueroa Street, Room 212 Los Angeles, California 90012

The Public's Health can be automatically e-mailed to you (as a PDF document) each month. To subscribe, please visit http://www.ladhs.org/listserv and enter your e-mail address. Select "Department Newsletters" and then "**The Public's Health**." You are welcome to make copies of this newsletter. To view this publication online – and obtain a variety of public health information and data – visit our website: www.lapublichealth.org



Gloria Molina, First District Yvonne B. Burke, Second District Zev Yaroslavsky, Third District Don Knabe, Fourth District Michael D. Antonovich, Fifth District

DEPARTMENT OF PUBLIC HEALTH:

Jonathan E. Fielding, MD, MPH Director and Health Officer

John F. Schunhoff, PhD Chief Deputy Director

Jeff Gunzenhauser, MD, MPH Medical Director of Public Health

Robert Kim-Farley, MD, MPH
Director, Communicable Disease Control and Prevention

Laurene Mascola, MD, MPH
Chief, Acute Communicable Disease Control

EDITORIAL BOARD:

Trista Bingham, MPH, MS
James DeCarli, MPH, MPA, CHES
Kevin Donovan, MPH
Kim Harrison, MPH, CHES
David Meyer, MPH
Nidhi Nakra, MPH
Sadina Reynaldo, PhD
Ben Techagaiciyawanis MPH, CHES

Sheree Poitier, MD, Editor in Chief Maria Iacobo, MS, Managing Editor Alan Albert, Design & Production Mary Louise Garcia, Administration

Get MRSA Resources and Updates Online

Learn more about MRSA at our specially dedicated webpage. Information about the disease, prevention, CME links, and patient education material can all be found at: http://www.lapublichealth.org/acd/MRSA.htm





*On-line Survey Request * On-line Survey Request *

FINAL REQUEST

TPH Survey

THE PUBLIC'S HEALTH is published by the Department of Public Health for all licensed physicians within Los Angeles County, other community healthcare providers and interested individuals.

The publication provides the latest information from the many programs within the department, such as Acute Communicable Disease Control, Environmental Health Services, Injury and Violence Prevention, Immunizations, and Chronic Disease Prevention. Our goal is to keep health professionals abreast of the latest data and information on county health issues.

We have created this survey to learn how our readership regards TPH and as a needs assessment to learn how we can better meet our readers' needs and improve this important news vehicle.

The survey can be accessed at https://lacws.co.la.ca.us/dhs/tphsurvey.htm.

Please take a few moments to complete the survey. Your opinion is very important to us.

If you prefer, you may print out the survey, complete it and mail it back to:

Sheree R. Poitier, MD, Editor in Chief, The Public's Health. 313 N. Figueroa St. Ste. 227. LA, CA, 90012

Educating 21st Century Public Health Veterinarians

The 21st century has seen increased societal concern about public health issues. The threat of bioterrorism and the increase in infectious and noninfectious diseases demonstrates the urgency of the problem.

Our veterinary externship program (http://lapublichealth.org/vet/externship/main.htm) is similar to the physician rotations in public health (http://ladhs.org/hr/mdrecruit/rotation.htm). It is designed for students who want experience working in a major metropolitan public health department.

In 2003, the Institute of Medicine held a workshop to explore educating health professionals for the 21st century. They concluded that effective change will require a dynamic collaboration between the professional and the academic communities. Public health education and training is inadequate without including a practical perspective to meet the new needs of society.

The purpose of practice-based teaching in public health is to develop veterinary students able to meet the broad, diverse, and multidisciplinary needs of community agencies with the goal of improving the public's health.

Advantages of a Public Health Rotation

- Benefits the student, the veterinary school, the agency, and the community
- Interdisciplinary, and multidimensional approach to problem solving
- Develops critical thinking and problem-solving skills to make sound judgments
- Provides perspectives on diverse populations

The county's program provides an opportunity for veterinary students to explore a career in public health by providing a "hands on" experience. One aim is to encourage students to become ambassadors of public health upon graduation.

Our three main areas of focus are:

- Veterinary Public Health
- Rabies Control
- Bioterrorism

Of the biological agents most likely to be used in terrorist acts, most are animal diseases and many are endemic in the county. During training, students are involved in problem-solving activities necessary to successfully manage these medical emergencies.

Our first veterinary extern in 2005 was from Minnesota's School of Veterinary Medicine. Since then we have had six additional fourth year students complete the program. This fall, a student from the University of California's School of Veterinary Medicine is with us for six months.

For more information on participation in our veterinary rotation program, contact Dr. Patrick Ryan at 562 401-7051.

C. Patrick Ryan. DVM, MPH.

Veterinary Public Health and Rabies Control

References

- 1. The Institute of Medicine 2003 report, Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century http://www.iom.edu/CMS/2955.aspx
- 2. Demonstrating Excellence in Practice-based Teaching for Public Health. J Public Health Management Practice, 2006, 12(1), 15–21
- 3. Undergraduate public health education in UK medical schools struggling to deliver. Gillam S Medical education 2006; 40(5): 430-6

Findings from the 2005 Los Angeles Mommy and Baby (LAMB) Survey...from page 1

The 2005 LAMB received a total of 5,329 completed surveys with a response rate of about 50%. Information from these postpartum women who completed the LAMB Survey was weighted to represent LAC.

PRECONCEPTION HEALTH FINDINGS FROM LAMB:

Mothers with low birth weight or preterm infants were more likely to:

- Lack health insurance before pregnancy
- Have an unintended pregnancy
- Have smoked 6 months before pregnancy
- Have had a previous low birthweight/preterm infant
- Be overweight/obese according to their pre-pregnancy BMI
- Not take multivitamins in the month before pregnancy
- Have eaten less because of not having enough money to buy food 12 months before delivery

Prevalence of Preconception Health Experiences In Los Angeles County Findings from the 2005 Los Angeles Mommy and Baby (LAMB) Survey

| Prevalence of Preconception Health Experiences | 2005 Prevalence | 95% Confidence Interval | | Estimated Number | |
|-------------------------------------------------------------------------------------------------|-----------------|-------------------------|--------|------------------|--|
| Health Care Access Before Pregnancy | | | | | |
| Uninsured before pregnancy | 32.6% | 30.6% | 34.8% | 48,724 | |
| Had a usual place of care before pregnancy | 69.0% | 67.0% | 71.1% | 103,128 | |
| Family Planning | | | | | |
| Using birth control when they became pregnant | 24.6% | 22.7% | 26.5% | 36,767 | |
| Unintended pregnancy | 38.8% | 36.6% | 40.9% | 57,991 | |
| Risk Taking Behavior Before Pregnancy | | | | | |
| Smoked 6 months before pregnancy | 9.4% | 8.2% | 10.5% | 14,049 | |
| Reported partner abuse before pregnancy | 8.8% | 7.5% | 10.1% | 13,152 | |
| Medical Condition Before Pregnancy | 0.004 | 5 00/ | 40.20/ | | |
| Ever had a low birthweight/preterm infant | 9.0% | 7.8% | 10.3% | 13,451 | |
| Asthma before pregnancy | 5.0% | 4.1% | 5.8% | 7,473 | |
| High blood pressure before pregnancy | 2.6% | 1.9% | 3.3% | 3,886 | |
| Diabetes before pregnancy | 2.8% | 2.1% | 3.6% | 4,184 | |
| Anemia before pregnancy | 9.4% | 8.2% | 10.7% | 14,049 | |
| Were under weight according to their pre-pregnancy BMI | 15.4% | 13.8% | 17.0% | 23,017 | |
| Were over weight/obese according to their pre-pregnancy BMI | 37.4% | 34.0% | 40.9% | 55,897 | |
| Nutrition Before Pregnancy | | | | | |
| Did not take multivitamins in the month before pregnancy | 54.8% | 52.6% | 56.8% | 81,905 | |
| Ate less than one felt because of not having enough money to buy food 12 months before delivery | 9.8% | 8.5% | 11.2% | 14,647 | |

Continued on page 5

Findings from the 2005 Los Angeles Mommy and Baby (LAMB) Survey...from page 4

WHAT THE COUNTY IS DOING

- The Los Angeles County Department of Public Health (DPH) has been implementing a series of activities to promote access to quality preconception care. MCAH is advancing the integration of preconception health practices and policies in public health through the Los Angeles County Preconception Health Collaborative (LACPHC).
- LACPHC is developing a Preconception Health Speakers' Bureau that will serve as a resource for community-based education. Presentations will be available for Public Health staff to use to educate medical providers, nurses, and community members.
- In partnership with California Family Health Council, Title X family planning clinics are assessing the level of pre- and interconception care being practiced. They will use the information to develop a curriculum for integrating pre- and interconception care into family planning clinics.
- DPH in partnership with The Los Angeles County Healthy Weight for Women of Reproductive Age-Action Learning Collaborative aims to build state and local capacity to help women of reproductive age achieve healthy weight before, during and after pregnancy.

NEXT STEPS

In order to continue gaining a comprehensive understanding of the factors that are responsible for LAC mother's not achieving optimal preconception health, limitations of the 2005 LAMB Survey are currently being addressed in the updated 2007 LAMB Survey. In particular, the 2007 LAMB Survey will explore in greater detail the factors that account for a lack of preconception health for high-risk mothers, such as why they did not get early prenatal care, disparities and barriers to the preconception health care system, and the content of the preconception health care received by LAC mothers.

For more information about LAMB, please refer to the LAMB website at www.lalamb.org or contact Dr. Margaret Chao at 213-639-6470

Kevin Donovan, MPH.

Maternal, Child and Adolescent Health

References

- 1 http://www.cdc.gov/ncbddd/preconception/default.htm
- 2 R Dudek, J Fix. (2007). Embryology, 4th ed. Philadelphia. Lippincott Williams & Wilkins.
- 3 D Foster, C Harper, J Bley, J Mikanda, M Induni, E Saviano, F Stewart. Knowledge of emergency contraception among women aged 18 to 44 in California.

 American Journal of Obstetrics and Gynecology 2004; 191, (1):150-156.
- 4 Merck Manual Home Edition. Stages of Development. Available at http://www.merck.com. Accessed September 2007.
- 5 PRAMS Perspectives: A pregnancy risk assessment monitoring system quarterly report. Vol.1 No.2. Available at http://health.utah.gov/rhp/prams/Unintended.pdf. Accessed October 2007.
- 6 K Simpson, P Creehan. Perinatal Nursing (2001). Association of Women's Health, Obstetric, and Neonatal Nurses. Philadelphia. Lippincott Williams & Wilkins.
- 7 C Weisman, M Hillemeier, G Chase, A Dyer, S Baker, M Feinberg, D Symons Downs, R. Parrott, H. Cecil, J. Botti. Preconceptional health: Risks of adverse pregnancy outcomes by reproductive life stage in the Central Pennsylvania Women's Health Study (CePAWHS). Women's Health Issues 2006;16 (4): 216-224.
- 8 C Sanders, M Lucas. Medical complications in pregnancy: renal disease in pregnancy. Obstetrics and Gynecology Clinics 2001; 28(3). Accessed September 10, 2007.
- 9 S Siu, JColman. Cardiovascular problems and pregnancy: an approach to management. Cleveland Clinical Journal of Medicine 2004; 71: 977-985.
- 10 S Thorne. Pregnancy & heart disease. Heart 2004; 90: 450-456

Race, Access to Healthcare and Diagnosis with Recent **HIV Infection Among Newly HIV-diagnosed Persons** in Los Angeles County, 2003-2004.

Background

According to AIDS surveillance data for Los Angeles Race and Diagnosis with Recent HIV Infection

County (LAC), African Americans/ Blacks and Latinos experience the greatest burdens of infection compared to other racial/ethnic groups. In 2005, African Americans had the highest rate of new AIDS diagnoses and Latinos composed the largest proportion of all AIDS diagnoses. (1) Despite the heavy impact of the HIV/AIDS epidemic on African Americans and Latinos, early detection of HIV among these

populations is relatively low. Previous studies conducted in the county have noted major socio-demographic and risk-group disparities in the likelihood of diagnosis with recent HIV infection.(2) We examined the role of healthcare access and HIV testing frequency in the diagnosis of recent HIV infection among newly HIVdiagnosed persons in LAC.

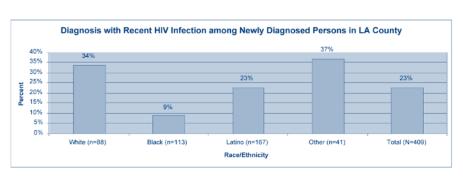


Between January 2003 and November 2004, 409 persons newly diagnosed with HIV infection

participated in a research study from a convenience sample of 40 local HIV test providers in the county. Participants were interviewed and agreed to be tested with a less-sensitive EIA assay (LS-EIA) to estimate recent HIV infection. Participants whose LS-EIA was nonreactive or who had documentation of a previous negative HIV test within the past year were defined as being recently

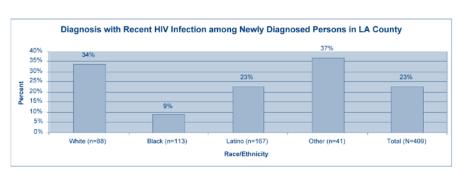
infected. Participants whose LS-EIA was reactive were defined as having HIV infection of unknown duration. Patients who reported having a particular provider they visited when they were sick or needed advice about their health were defined as having access to healthcare. Chi square, independent t-tests, ANOVA, and logistic regression were used to investigate correlates of diagnosis with recent HIV infection.

Results



- Ninety–four (23%) of the 409 persons with a new HIV diagnosis were recently infected based on STARHS (n=79; 19%) or on documented HIV seronegativity within the previous 12 months (n=15; 4%).
- Compared with Black persons, proportionally more White (34% vs. 9%; odds ratio (OR) 6.0; 95% confidence interval (CI) 2.6-13.8) and Latino persons (23% vs. 9%; OR 3.5; CI 1.6-7.6) were recently infected.

Access to Healthcare, Race and Diagnosis with Recent



HIV Infection

• After controlling for access to care, Latinos were just as likely as Whites to be diagnosed with recent infection. Blacks, however, were still less likely to be diagnosed with recent infection compared to Whites.

Continued on page 7

Race, Access to Healthcare and Diagnosis...from page 6

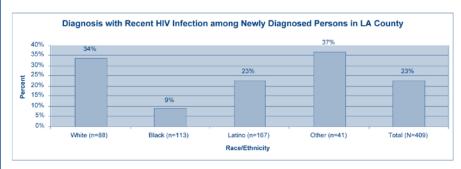
• Compared with Whites (51%), lower proportions of Blacks (42%) and Latinos (29%) reported having health insurance (p<0.05).

HIV testing frequency and Race

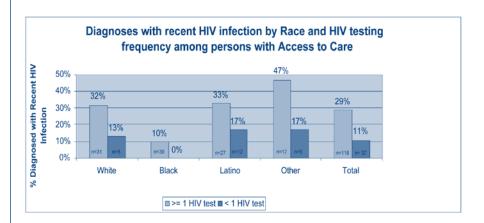
• The mean number of lifetime HIV tests was higher among Whites (11) compared with Latinos (5) and Blacks (6) (p < 0.05). However, among those with access to care there was no difference in the mean number of HIV tests received by Whites (3), Blacks (2), and Latinos (3) in the 2 years prior to HIV diagnosis.

Conclusions

Among persons newly diagnosed with HIV recruited from our network of HIV test providers in the county, nearly one in four had acquired HIV in the year before their diagnosis. Black persons were diagnosed with HIV later in the course of their infection compared with Whites and Latinos. Based on our analysis, increased access to healthcare may improve early HIV diagnosis for Latinos but not for Blacks. Further investigation is needed to understand the barriers to early HIV diagnosis among Blacks.



 After controlling for HIV testing frequency, Blacks remained less likely than Whites and Latinos to be diagnosed with recent HIV infection.



 Controlling for both access to care and HIV testing frequency did not account for the lower proportion of Blacks diagnosed with recent HIV infection as compared with Whites and Latinos.

Kwa Sey, MPH, PhD Trista Bingham, MPH, MS

HIV Epidemiology Program

References

- 1. HIV Epidemiology Program, Los Angeles County Department of Public Health. HIV/AIDS Surveillance Summary, July 2007: 1-28.
- 2. Johnson DF, Sorvillo FJ, Wohl AR, Bunch G, Harawa NT, Carruth A, Castillon M, Jimenez B. Frequent failed early HIV detection in a high prevalence area: implications for prevention. AIDS Patient Care and STDs 2003;17:277-282.

Continuing Confusions, Enduring Errors:

Three Common Misunderstandings about Pandemic Influenza

Pandemic flu continues to be a popular topic covered by the news media. However, several common misunderstandings persist.

1. Pandemic flu is not the same thing as bird flu.

The urgency to prepare for a presumed imminent pandemic kicked into high gear with the spread of a strain of highly pathogenic bird flu (avian influenza A H5N1) throughout Asia starting in the late 1990s. The media coverage that followed the outbreak and spread of H5N1 appear to have confused the terms associated with the disease.

Bird flu is **not** the same thing as pandemic flu—the terms are not synonymous. The two terms should not be used interchangeably since this **incorrectly** implies that *only* this particular strain of bird flu might be responsible for the next pandemic, and it **incorrectly** implies that only bird flu viruses can cause a pandemic (pig viruses can also infect humans and may also be the cause of a flu pandemic). Birds, like many other animals, can contract flu. Occasionally when people have contact with infected birds, they can acquire that virus; this is happening now with H5N1.

But bird flu does not spread from person-to-person and the current strain of bird flu that has caused concern (H5N1) is not present in animals in the U.S. An influenza pandemic occurs when a human flu virus mutates so dramatically—often when it jumps from one species to another—that there is no existing immunity in the population, so the newly mutated flu strain is able to spread rapidly from person-to-person.

2. Antivirals will not be effective for community-wide prevention (prophylaxis) during an influenza pandemic. Instead, make sure your patients know how they can decrease their risk of exposure to flu.

While antivirals have been a valuable asset in the arsenal of medical advances against flu, their role for prevention of infection during a pandemic is greatly misunderstood. For seasonal flu, antivirals have never been recommended as a substitute for vaccination—vaccination is still the best method for preventing flu.

Bird flu is not the same thing as pandemic flu. The terms are not synonymous.

More importantly, to be effective as prophylaxis, antivirals must be taken for the entire length of exposure. For seasonal flu, this is typically based on expected household exposure—approximately a week. But pandemics can last for months, so many questions arise. When would you start taking antivirals? When would you stop? How would you obtain enough during a time when supplies would most likely be limited? What would be the side effects from taking antivirals for a duration that is much longer than what it has been approved for?

Continued on page 9

An influenza pandemic occurs when a human flu virus mutates so dramatically — often when it jumps from one species to another — that there is no existing immunity in the population, so the newly mutated flu strain is able to spread rapidly from person-to-person.

Three Common Misunderstandings about Pandemic Influenza...from page 8

While the role of antivirals during a pandemic is debated, most experts agree the best response is not a medical solution to prevention, but a behavioral solution: avoiding situations that increase your likelihood for exposure and enacting healthy habits like washing your hands, appropriately covering your coughs and sneezes and staying home when sick.

3. An influenza pandemic is not necessarily more severe than seasonal flu. Preparing now against seasonal flu is not only important for staying healthy this season, but it can help prepare for pandemic flu as well.

Yes, the impact of a pandemic can be substantial, but an influenza pandemic will not necessarily result in more illness and deaths than what we experience every year from seasonal flu. In fact, the last pandemic, the 1968 "Hong Kong Flu" (a strain of influenza A H3N2), is believed to have caused 34,000 deaths in the U.S. In contrast, seasonal flu is responsible for an average of 36,000 deaths a year.

Pandemic influenza warrants serious preparation. However, seasonal flu is a serious disease that causes considerable illness, hospitalizations and deaths, and demands concerted response and prevention.

The most effective method to prevent contracting the flu is vaccination. This year, flu vaccine is available in unprecedented levels. There is no need to prioritize or limit vaccination. Anyone who wishes to decrease their risk of illness should receive an influenza vaccination. And by broadening your scope of who you vaccinate, you help to reduce the burden of disease. Please encourage vaccination for all of your patients that do not have contraindications. Contraindications for influenza vaccination include severe allergic hypersensitivity to egg protein or other vaccine components and/or past medical history of Guillain-Barré. For further information on influenza vaccination, please visit http://www.cdc.gov/flu/protect/keyfacts.htm.

To subscribe to free emailed updates about seasonal and pandemic flu from the Los Angeles County Department of Public Health, email fluwatch@listserv. ladhs.org.

The most effective method to prevent contracting seasonal flu is vaccination. This year, flu vaccine will be available in unprecedented levels. There is no longer a need to prioritize or limit vaccination. Anyone who wishes to decrease their risk of illness should receive an influenza vaccination.

Sadina Reynaldo, PhD

Bioterrorism Unit

The influenza season is here!

You can receive regular updates with current county surveillance data and practice guidelines.

Subscribe to the influenza listserv to receive Influenza Watch - a weekly newsletter describing influenza activity in Los Angeles County and Pandemic Flu and You, a monthly newsletter providing information on pandemic and avian influenza. To view the current issue visit:

http://lapublichealth.org/acd/Flu_Sea_Surveillance.htm

To sign up for these reports visit: http://listserv.ladhs.org/ or send an email to ListServ@ListServ.ladhs.org with SUBSCRIBE FLUWATCH in the body (NOT subject) of the email. Influenza Watch is electronically distributed through the traditional influenza surveillance season (October to May) and Pandemic Flu and You is distributed monthly throughout the year.

Guidelines for Diagnosing and Reporting Hepatitis A and B

Viral hepatitis continues to be a significant cause of morbidity and mortality worldwide and in Los Angeles County. Acute hepatitis A and B remain two of the most common vaccine preventable diseases and hepatitis C remains the most common bloodborne disease in the U.S. Public health surveillance for these conditions is important because with timely and appropriate reporting outbreaks can be contained, risk factors can be identified and prevention efforts can be targeted.

Public health surveillance starts with clinicians reporting diseases. The California Code of Regulations (title 17, Section 2500) requires hepatitis cases be reported by health care providers such as physicians, veterinarians, podiatrists, physician assistants, registered nurses, dentists, chiropractors, and laboratories. The law also requires that the provider specify whether the infection is acute or chronic.

In addition to a positive laboratory test, to be considered a case of acute hepatitis, patients must have 1) elevated liver function tests and 2) an acute onset of symptoms (vomiting, diarrhea, fever, chills, abdominal pain, and fatigue). Therefore, all reports of acute hepatitis should be accompanied with the most recent levels of liver function tests and date of symptom onset.

Because DPH receives so many reports from laboratories of positive tests for hepatitis, we are dependent upon health care providers to specify if the case is acute or chronic.

Timely reporting is essential.

Half of the acute hepatitis A and B cases are reported to our department more than 14 days after onset of disease, meaning that it is too late to provide IG for post-exposure prophylaxis to close contacts of the cases. Underreporting or delayed reporting of hepatitis cases inhibits us from controlling the spread of disease and identifying persons in need of post-exposure prophylaxis. To facilitate timely reporting, the department accepts reports of hepatitis by fax, phone, or mail 7 days a week.

Ordering Tests

Ordering appropriate tests for patients is part of good healthcare. Tests for acute hepatitis are not 100% specific and may result in puzzling findings (if positive) in an asymptomatic patient. Tests for acute hepatitis should only be ordered on patients with acute symptoms (abdominal pain, fever, chills, vomiting/diarrhea).

In the past several years, it has been increasing observed that acute hepatitis panels (including IgM tests) are often ordered for asymptomatic patients. Positive screening tests in asymptomatic patients should not be considered evidence of acute disease. Such reports cause public health personnel to initiate unnecessary and time consuming investigations. To minimize unnecessary medical visits and psychological harm for persons who test false positive by screening tests, all suspected hepatitis A, B, and C cases should receive appropriate lab tests.

Below is a summary of the appropriate serologic test for each clinical syndrome.

| Reason for Testing | Recommended Tests | | | |
|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| r/o acute hepatitis A in patients with signs and symptoms | IgM anti-HAV | | | |
| Testing immunity due to previous HAV infection | Total anti-HAV | | | |
| r/o acute hepatitis B in patients with signs and symptoms | IgM anti-HBc | | | |
| Testing immunity due to previous HBV infection or vaccination | Anti-HBs | | | |
| r/o hepatitis C (acute or chronic) | Anti-HCV, if positive, verified by RIBA or PCR, or a signal to cut-off ratio > 3.8 for EIA (cut-off ratio > 8 for CIA) | | | |
| Testing for asymptomatic elevated ALT or pregnant | HBsAg, anti-HBs and total anti-HBc; Anti-HCV, if positive, verified by RIBA or PCR, or a signal to cut-off ratio > 3.8 for EIA (cut-off ratio> 8 for CIA) | | | |

Hepatitis B

Interpretation of hepatitis B serology tests can be challenging. There are tests for the acute and chronic state and also vaccine induced immunity. Furthermore, there are tests for the presence of virus.

Continued on page 11

Guidelines for Diagnosing and Reporting Hepatitis A and B...from Page 10

Below is a chart of common serological results and the correct HBV) or in the case of a newborn to a chronically infected interpretation of these results.

Hepatitis B Serological Results and Interpretation

| HBsAg* | HBcAb | HB IgM** | HBsAb | Interpretation |
|--------|-------|----------|-------|---------------------------------------------------------------------------|
| _ | _ | _ | _ | Susceptible; never infected |
| + | _ | _ | _ | Early acute infection or transient (21 days) after vaccination |
| + | + | + | _ | Acute Infection |
| | + | + | _ | Acute resolving infection |
| _ | + | _ | + | Past infection; recovered and immune |
| + | + | _ | _ | Chronic Infection |
| | + | | | False positive or infant born to a mother who is positive for HBsAg |
| | | | + | Immune if titer is > 10 mlU/ ml (from vaccination)*** |

- * If patient has received Hep. B vaccine in the past 21 days, HBsAg could be positive with any combination of results. If patients have recently received the vaccine and they have a positive test for HBcAb, they should be re-tested for the presence of HBsAg >21 days after vaccination to determine chronic
- ** HB IgM can last up to 6 months and can occur in the absence of
- *** Hepatitis B vaccine is made from recombinant HBsAg. Over time, the patient should develop antibodies to HBsAb. If the level of antibodies is >10 mlU/ml 1-2 months after the last dose of the series the patient is considered immune, even if the level is undetectable at a future time.

Note: If a patient has a positive test for HBcAb or HBsAb (or a + Hep B surface antigen test in the absence of recent vaccination), vaccination for hepatitis B is not indicated as they have already been infected.

Occasionally patients have HBcAb and HBsAg and HBsAb in the case of a patient making insufficient or inefficient antibodies to the virus. In this case, the patient is considered a chronic carrier because of the persistence of the HBsAg. It is also possible to have single Hep B total core antibody + and HBsAg- and HBsAb-. This occurs in the case of people with multiple blood borne pathogens (HIV and HCV along with

mother. These situations are the exceptions.

Hepatitis A

Hepatitis A is simpler because there are fewer antibody types and no antigens.

When the hepatitis A virus enters the body, the initial response is an IgM response, followed by an IgG response. The IgM test reflects only the presence of IgM. The total antibody test reflects the presence of IgM, IgG, or both. You cannot tell from a solitary HAV total AB test if the patient has acute or past infection with hepatitis A. You can only tell that they have been infected with hepatitis A. To determine if a patient has an acute case of hepatitis A, an IgM test must be ordered. If either test is positive, hepatitis A vaccine is not indicated because infection with hepatitis A confers lifelong immunity.

Vaccination for hepatitis A can give a transient IgM response. A minority of adults (<20%) will have detectable IgM 2-3 weeks after vaccination. Some may also have a positive test for HAV total antibody but the levels of total antibody generated by vaccine are much less than the levels generated by natural infection. Even without a measure level of total HAV antibody, persons are considered immune after vaccination and there is no reason to check post vaccination serologies.

Note: Hepatitis A IgM can last up to six months, and in some cases longer. There are also documented false positive tests for hepatitis A IgM. Therefore, only those patients with signs and symptoms of acute hepatitis A (sudden onset of fatigue, jaundice, nausea, abdominal pain, and diarrhea) should have a test for hepatitis A IgM. If patients do not have acute illness, then any positive result on the IgM test should be considered false unless there is an epidemiological link to another documented case of acute hepatitis A.

For more information about surveillance of hepatitis or interpretation of hepatitis serologies, please contact the Acute Communicable Disease Control program at 213-240-7941.

An upcoming article on hepatitis C will be released

Elizabeth Bancroft, MD, SM Jane Maynard, RN, PHN, MSN

Physician Registry

Become a Member of the Health Alert Network

The Los Angeles County Department of Public Health urges all local physicians to register with the Health Alert Network (HAN). By joining, you will receive periodic email updates alerting you to the latest significant local public health information including emerging threats such as pandemic influenza. Membership is free. All physician information remains private and will not be distributed or used for commercial purposes.

Registration can be completed online at www.lahealthalert.org or by calling (323) 890-8377

Be aware of public health emergencies! Enroll now!

| This Issue |
|-----------------------------------------------------------------|
| Preconception Care Findings1 |
| Educating 21 st Century Public Health Veterinarians3 |
| Race , Access to Healthcare6 |
| Misunderstandings about Pandemic Influenza8 |
| Guidelines for Diagnosing and Reporting Hepatitis10 |



| Selected Reportable Diseases (Cases) ¹ — June/July 2007 | | | | | | | |
|--------------------------------------------------------------------|----------------------------------|--------------------------------------------|-------------------------|--------|-----------------|--------|--------|
| | THIS PERIOD JUNE/JULY 2007 | SAME PERIOD LAST YEAR JUNE/JULY 2006 | YEAR TO DATE –JUNE/JULY | | YEAR END TOTALS | | |
| Disease | | | 2007 | 2006 | 2006 | 2005 | 2004 |
| AIDS ¹ | 230 | 182 | 846 | 740 | 1382 | 1506 | 2210 |
| Amebiasis | 21 | 14 | 69 | 44 | 94 | 114 | 114 |
| Campylobacteriosis | 193 | 148 | 527 | 427 | 774 | 725 | 884 |
| Chlamydial Infections | 6,998 | 6,722 | 24,511 | 23,436 | 39,946 | 38,862 | 38,464 |
| Encephalitis | 5 | 8 | 25 | 31 | 45 | 57 | 133 |
| Gonorrhea | 1,649 | 1,711 | 5,754 | 6,193 | 10,459 | 10,494 | 9,696 |
| Hepatitis Type A | 8 | 30 | 48 | 294 | 365 | 480 | 321 |
| Hepatitis Type B, acute | 8 | 4 | 26 | 38 | 62 | 57 | 72 |
| Hepatitis Type C, acute | 0 | 0 | 1 | 2 | 4 | 3 | 5 |
| Measles | 0 | 0 | 0 | 1 | 1 | 0 | 1 |
| Meningitis, viral/aseptic | 82 | 62 | 182 | 195 | 369 | 515 | 807 |
| Meningococcal Infect. | 3 | 3 | 17 | 32 | 46 | 37 | 28 |
| Mumps | 0 | 1 | 4 | 4 | 10 | 10 | 5 |
| NGU | 32 | 154 | 250 | 512 | 758 | 1,101 | 1,470 |
| Pertussis | 2 | 25 | 31 | 100 | 149 | 438 | 156 |
| Rubella | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Salmonellosis | 247 | 260 | 572 | 610 | 1,216 | 1,085 | 1,205 |
| Shigellosis | 129 | 92 | 212 | 226 | 521 | 710 | 625 |
| Syphilis (prim. and sec.) | 120 | 140 | 493 | 456 | 793 | 644 | 470 |
| Syphilis early latent | 80 | 115 | 408 | 402 | 754 | 570 | 395 |
| Tuberculosis | 127 | 136 | 297 | 345 | 885 | 906 | 930 |
| Typhoid fever, Acute | 3 | 2 | 9 | 9 | 17 | 12 | 13 |

^{1.} Case totals are provisional and may vary following periodic updates of the database.